

Response Under 37 C.F.R. 1.116

Applicant: Yung Yip et al.

Serial No.: 10/822,884

Filed: April 13, 2004

Docket No.: 10305US02

**Title: STATIC DISSIPATIVE HOUSING FOR DATA CARTRIDGE CARRYING NON-TAPE
STORAGE MEDIUM****REMARKS**

The following Remarks are made in response to the Final Office Action mailed July 3, 2007, in which claims 1-8 and 16-20 were rejected.

Claims 1-8 and 16-20 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 112

Claims 1-8, 10, and 16-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. More specifically, the Examiner contends that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants note that claim 10 was previously cancelled without prejudice. The rejection of claim 10 under 35 U.S.C. 112, first paragraph, therefore, is moot.

Applicants respectfully traverse the rejection of claims 1-8 and 16-20 under 35 U.S.C. 112, first paragraph, and submit that "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square" is described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. For example, at page 14, lines 12-24, the Specification provides that:

In one embodiment, static dissipation of housing 32 is established by forming housing 32 of a thermal plastic material including a static dissipative polymer. More specifically, in one embodiment, housing 32 is formed of a material including at least one of polypropylene, polyethylene, polystyrene, nylon, polycarbonate, ABS, and acrylic, and a dissipative polymer. In one exemplary embodiment, housing 32 is formed of a material including polycarbonate, nylon, and a dissipative polymer. An example of such a material includes PermaStat® 399X-10739A available from RTP Company of Winona, Minnesota. In another exemplary embodiment, housing 32 is formed of a material including ABS resin and a dissipative polymer. An example of such a material includes Stat-Loy® A BK8-115 available from LNP Engineering Plastics Inc. of Exton, Pennsylvania.

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In addition, at page 14, line 25 - page 15, line 2, the Specification provides that:

In another embodiment, static dissipation of housing 32 is established by forming housing 32 of a carbon-filled resin. More specifically, in one embodiment, housing 32 is formed of a material including at least one of ABS, polystyrene, polycarbonate, polypropylene, and nylon, and a carbon fiber or carbon powder. In one exemplary embodiment, housing 32 is formed of a material including polycarbonate and carbon powder. An example of such a material includes Stat-Kon® D-EP V-I available from LNP Engineering Plastics Inc. of Exton, Pennsylvania.

The Specification, therefore, identifies PermaStat, Stat-Loy, and Stat-Kon as specific examples of materials for the housing. Applicants note that as identified in the brochure entitled "PermaStat Compounds," by RTP Company, the PermaStat material "featur[es] a consistent surface resistivity of 10^{10} to 10^{11} ohms/square." In addition, as identified on page 3 of the brochure entitled "Stat-Kon: A Guide To LNP's Line Of Thermoplastic Composites For Electrostatic Dissipation," by LNP Engineering, Stat-Loy Anti-Static Composites are available in the 10^9 - 10^{12} ohms/sq. range, and Stat-Kon Dissipative Composites are available in the 10^6 - 10^9 ohms/sq. range. Thus, as described in the Specification, forming the housing of a material such as PermaStat, Stat-Loy, or Stat-Kon does enable "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square."

Applicants note that the focus of the examination inquiry regarding enablement is whether everything within the scope of the claim is enabled. MPEP 2164.08. See, e.g., *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244, 68 USPQ2d 1280, 1287 (Fed. Cir. 2003) (When a range is claimed, there must be reasonable enablement of the scope of the range.) As concerns the breadth of a claim relevant to enablement, the only relevant concern should be whether the scope of enablement provided to one skilled in the art by the disclosure is commensurate with the scope of protection sought by the claims. MPEP 2164.08. *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244, 68 USPQ2d 1280, 1287 (Fed. Cir. 2003); *In re Moore*, 439 F.2d 1232, 1236, 169 USPQ 236, 239 (CCPA 1971). Applicants note that the determination of the propriety of a rejection based upon the scope of a claim relative to the scope of the enablement involves two stages of inquiry. The first inquiry is to determine how broad the claim is with respect to the disclosure,

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and the second inquiry is to determine if one skilled in the art is enabled to make and use the entire scope of the claimed invention without undue experimentation. MPEP 2164.08.

In addition, Applicants note that the written description requirement for a claimed genus may be satisfied through sufficient description of a "representative number of species." MPEP 2163 III.A.3.(a) ii). See *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406. A "representative number of species" means that the species which are adequately described are representative of the entire genus. MPEP 2163 III.A.3.(a) ii).

In this instance, everything within the scope of claims 1-8 and 16-20 is enabled. For example, independent claims 1 and 16 each recite "a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square." As outlined above, forming the housing of a material such as PermaStat enables a surface resistivity of 10^{10} to 10^{11} ohms/square, forming the housing of a material such as Stat-Loy enables a surface resistivity of 10^9 - 10^{12} ohms/square, and forming the housing of a material such as Stat-Kon enables a surface resistivity of 10^6 - 10^9 ohms/square. Thus, the scope of enablement provided to one skilled in the art by the disclosure is commensurate with the scope of protection sought by the claims (viz., a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square). In addition, one skilled in the art is enabled to make and use the entire scope of the claimed invention without undue experimentation. More specifically, by forming the housing of a material such as PermaStat, Stat-Loy, or Stat-Kon, as described in the Specification, one skilled in the art is enabled to make a housing having "a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square."

Furthermore, the claimed genus of "a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square" is supported by a "representative number of species." For example, forming the housing of different materials such as PermaStat, Stat-Loy, and Stat-Kon, as described in the Specification, provides different "species" of the housing. More specifically, as outlined above, forming the housing of a material such as PermaStat provides a housing having a surface resistivity of 10^{10} to 10^{11} ohms/square, forming the housing of a material such as Stat-Loy provides a housing having a surface resistivity of 10^9 - 10^{12} ohms/square.

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square, and forming the housing of a material such as Stat-Kon provides a housing having a surface resistivity of 10^6 - 10^9 ohms/square. Thus, the species which are adequately described are representative of the entire genus (viz., a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square).

In view of the above, Applicants submit that "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square" is described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Accordingly, Applicants respectfully request that the rejection of claims 1-8 and 16-20 under 35 U.S.C. 112, first paragraph, be reconsidered and withdrawn, and that claims 1-8 and 16-20 be allowed.

Claims 3-5 and 17 are rejected under 35 U.S.C. 112, first paragraph, in that the Examiner contends that the specification does not reasonably provide enablement for a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square.

Applicants respectfully traverse this rejection and submit that "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square" is described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with the claims. For example, as described in the Specification at pages 14-15 and as outlined above, forming the housing of a material such as PermaStat, Stat-Loy, or Stat-Kon does enable "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square."

More specifically, Applicants note that claims 3-5 and 17 are dependent claims of independent claims 1 and 16, respectively, and, as such, further limit the claimed subject matter of independent claims 1 and 16. For example, claim 3 recites "wherein the housing is formed of a static dissipative polymer." As such, claim 3 includes "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square," "wherein the housing is formed of a static dissipative polymer."

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In one exemplary embodiment, at page 14, lines 17-20, the Specification provides that "housing 32 is formed of a material including polycarbonate, nylon, and a dissipative polymer. An example of such a material includes PermaStat® 399X-10739A available from RTP Company of Winona, Minnesota." In another exemplary embodiment, at page 14, lines 20-24, the Specification provides that "housing 32 is formed of a material including ABS resin and a dissipative polymer. An example of such a material includes Stat-Loy® A BK8-115 available from LNP Engineering Plastics Inc. of Exton, Pennsylvania."

As outlined above, forming the housing of a material such as PermaStat enables a surface resistivity of 10^{10} to 10^{11} ohms/square, and forming the housing of a material such as Stat-Loy enables a surface resistivity of 10^9 - 10^{12} ohms/square. Thus, as PermaStat and Stat-Loy each enable a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square, and each include a dissipative polymer, "a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square," "wherein the housing is formed of a static dissipative polymer" as claimed, for example, in dependent claim 3 is enabled. Dependent claims 4, 5, and 17 are similarly enabled.

In view of the above, Applicants submit that the specification does reasonably provide enablement for a housing having a surface resistivity in a range of approximately 10^6 ohms/square to approximately 10^{12} ohms/square. Accordingly, Applicants respectfully request that the rejection of claims 3-5 and 17 under 35 U.S.C. 112, first paragraph, be reconsidered and withdrawn, and that claims 3-5 and 17 be allowed.

Claim Rejections under 35 U.S.C. § 103

Claims 1-8 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albretch et al. US Publication No. 2002/0159182 in view of Waggoner et al. US Publication No. 2004/0113129 and "STAT: Guide To LNP's Line Of Thermoplastic Composites For Electrostatic Dissipation" (STAT).

Applicants respectfully traverse this rejection and submit that the Albretch, Waggoner, and STAT references, individually or in combination, do not disclose a data cartridge as claimed

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in independent claim 1 or independent claim 16 including a housing adapted to dissipate a static charge of the data cartridge.

The Examiner recognizes that the Albretch reference does not teach the housing being formed of materials having a surface resistivity in a range of 10^6 ohms/square to 10^{12} ohms/square (Final Office Action, page 5), and suggests that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use static dissipative materials with a surface resistivity in a range of 10^6 ohms/square to 10^{12} ohms/square for the housing (Final Office Action, page 6).

Applicants note that the Albretch reference discloses a data storage cartridge having a data storage device, such as an encased magnetic disk drive assembly, supported and mounted in a cartridge shell (see, e.g., Abstract; Figs. 3 and 4). The Albretch reference discloses that the data storage cartridge has a backing plate 70 electrically coupled to the data storage device by means of land 85 of flex cable 65, to a ground thereof, thereby forming an electrostatic discharge path from the data storage device to the backing plate and through the electrically semiconductive material to the alignment pins of the transfer station, which are electrically grounded (para. [0066]; see also Fig. 18). Thus, backing plate 70 of the data storage cartridge of the Albretch reference provides an electrostatic discharge path for the data storage cartridge.

As backing plate 70 of the data storage cartridge of the Albretch reference already provides an electrostatic discharge path, Applicants submit that forming the cartridge shell of the data storage cartridge of the Albretch reference of a static dissipative material would not have been obvious for at least the reason that the data storage cartridge of the Albretch reference already includes an electrostatic discharge path.

In addition, the Albretch reference provides that backing plate 70 is formed of a semiconductive plastic material having electrical resistivity whereby, in one example, the material has sufficient embedded carbon to provide the electrical resistivity, comprising 10%-30% carbon filled plastic (para. [0066]). In one specific example, the Albretch reference provides that the material is a carbon filled plastic comprising a 20% carbon filled polycarbonate, called "Stat-Kon DC-1004-FR" (para. [0066]).

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Thus, the inventors of the Albretch reference, full aware of the Stat-Kon line of materials, chose not to form the cartridge shell of the data storage cartridge of a Stat-Kon material and chose only to form backing plate 70 of a Stat-Kon material. Since the inventors of the Albretch reference, full aware of the Stat-Kon line of materials, chose not to form the cartridge shell of the data storage cartridge of a Stat-Kon material, Applicants submit that the Albretch reference actually teaches away from forming the cartridge shell of a static dissipative material. A *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). Thus, Applicants submit that forming the cartridge shell of the data storage cartridge of the Albretch reference of a static dissipative material would not have been obvious.

In view of the above, Applicants submit that independent claims 1 and 16, and the dependent claims depending therefrom, are each patentably distinct from the Albretch, Waggoner, and STAT references and, therefore, are each in a condition for allowance. Applicants, therefore, respectfully request that the rejection of claims 1-8 and 16-20 under 35 U.S.C. 103(a) be reconsidered and withdrawn, and that claims 1-8 and 16-20 be allowed.

Double Patenting

Claims 1-8 and 16-20 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-5 of Hanzlik et al., US Patent No. 6,915,977, in view of Albretch et al. US Publication No. 2002/0159182.

Concurrently with this Amendment, a terminal disclaimer in compliance with 37 CFR 1.321(c) has been filed to overcome the non-statutory double patenting rejection based on US Patent No. 6,915,977. Applicants submit that the filing of this terminal disclaimer is to obviate the rejection based on non-statutory double patenting and is not an admission of the propriety of the rejection.

In view of the above, Applicants submit that the non-statutory double patenting rejection of claims 1-8 and 16-20 has been overcome. Applicants, therefore, respectfully request that the

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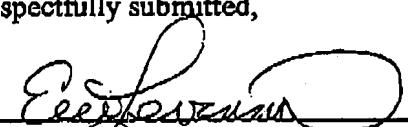
rejection of claims 1-8 and 16-20 under the judicially created doctrine of obviousness-type double patenting be reconsidered and withdrawn, and that claims 1-8 and 16-20 be allowed.

CONCLUSION

In view of the above, Applicants respectfully submit that pending claims 1-8 and 16-20 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-8 and 16-20 is respectfully requested.

The Examiner is invited to telephone the Applicants' representative at the below-listed number to facilitate prosecution of this application.

Respectfully submitted,

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